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Regional Impacts of the Northeast Coal Project in B.C.

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Regional Impacts of the Northeast Coal Project in B.C.

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by

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Abstract

Like other resource megaprojects initiated about a decade ago, B.C.'s Northeast Coal Project, which included two mines, a new railroad and a new town, was expected to be a significant stimulus to regional development.

Analyses of census data, and interviews with key informants in the South Peace region, were recently undertaken by the authors to determine the NECP's actual impacts on communities and residents who were in the region when the project began.

The project is found to have had some modest economic benefits for the two pre-existent towns nearest the mines: Chetwynd and the City of Dawson Creek, each about 100 kms. from one of the mines. The benefits were increased business for a wide range of local mine-servicing companies, increased retail sales from what they would have been in the absence of the mines, some mining jobs for residents, a stabilized regional population, and an expanded road network for the mining, petroleum, and forestry industries. The only significant cost which leaders of the two pre-existent towns believe has been incurred in exchange for these benefits is a major increase in regional property taxes resulting from the need to pay for facilities in the new town of Tumbler Ridge.

About 280 of the regional residents in 1981 (people living in the region at the time of the 1981 census, just prior to the beginning of NECP construction) had jobs in the regional coal mining industry in 1986. These jobs represented 15% of the 1,875 NECP mining industry jobs. This percentage is in line with government-sponsored impact predictions made just before construction began, but lower than regional residents' expectations and much lower than the 50% level proposed by planners in the 1970s. It is particularly disappointing in light of the consistently high rate of unemployment among regional residents: the rate was 16% in 1986.

It is determined from the census data that regional residents obtained 15% of the 605 indirect and induced jobs created in Tumbler Ridge, and from the interviews that regional residents maintained or obtained the vast majority of the 983 indirect and induced jobs located elsewhere in the South Peace. Since most indirect and induced jobs pay less well than mining jobs, it is not surprising that regional residents were found to have much lower incomes than the in-migrants: 13% of the former had 1985 individual incomes greater than $35,000 compared to 30% of the latter.

Very few direct jobs went to targeted disadvantaged groups. Only 40 regional women got jobs in coal mining (2% of the total) by 1986. Regional and in-migrant women together held 9% of the coal industry jobs in 1986, increasing their share to 13% in 1989. Indians and Metis living in the region, who have never had more than about 10 of the mining jobs, and who have suffered most from the environmental impacts, are bitter about the project.

In sum, the NECP stabilized the regional economy overall, but did not live up to expectations of early planners, existing towns, or targeted groups. The shortfall from expectations is attributed to development of the new town, to initially poor roads to Dawson Creek, to effective competition for new town business from the sales-tax-free Alberta city of Grande Prairie, to the concentration of regional resident employment in stabilized, but therefore undramatic, indirect and induced jobs, and to the lack of follow-through in implementing intended hiring and training programs for regional residents.

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Regional Impacts of the Northeast Coal Project in B.C.

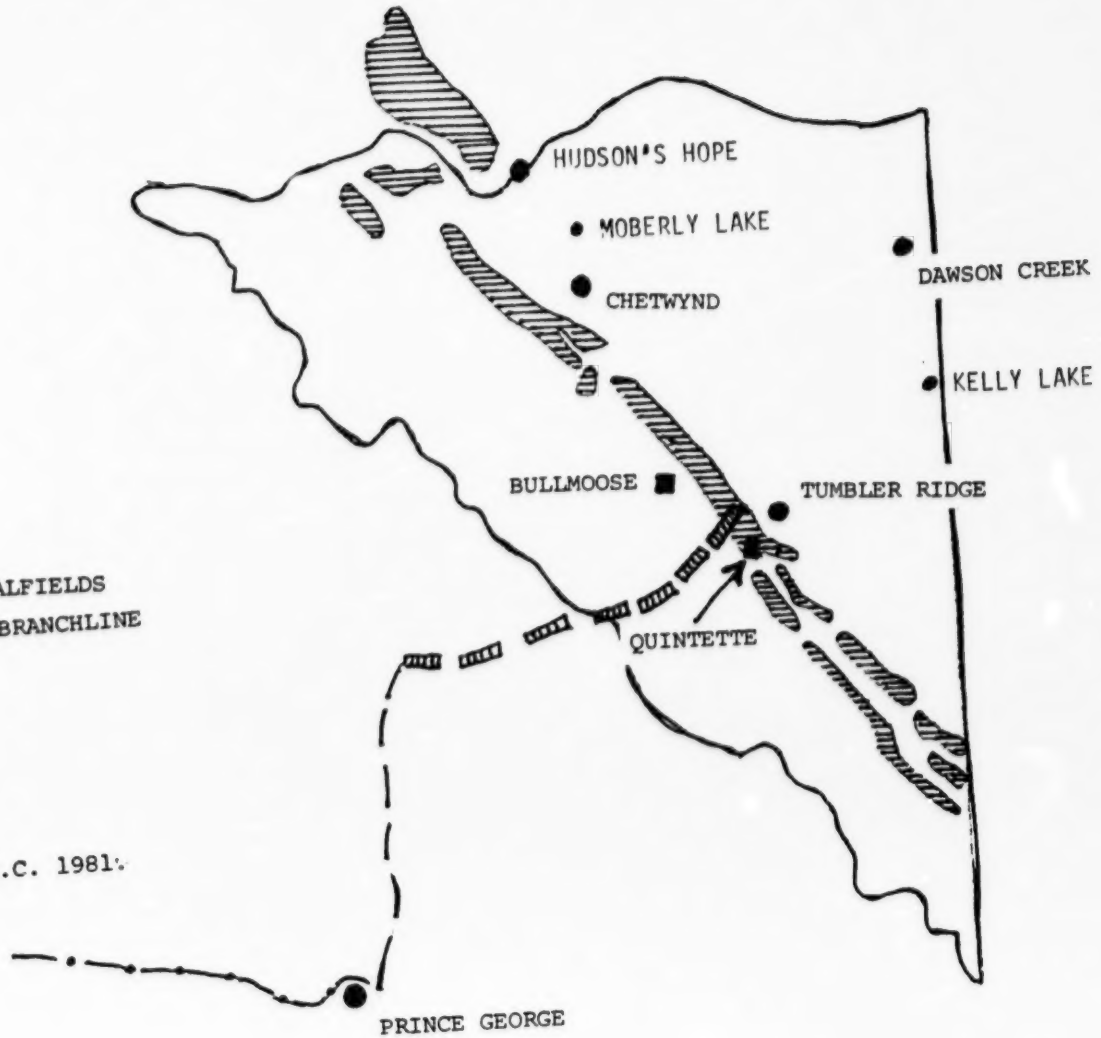
Introduction

The eastern flank of the Rocky Mountains provides an abundance of coal mining opportunities. In Alberta, these opportunities began to be captured decades ago. Interest in B.C.'s more northern and remote potential grew with rising coal prices in the 1970s.

After a decade of planning for development for the whole northeast coal belt, agreement on the specifically designated Northeast Coal Project (NECP) was reached in 1981. This project involved the development of two open-pit mines some 100 kilometres south of Chetwynd and Dawson Creek: the Bullmoose mine by Teck Corp. and the larger Quintette mine by Quintette Coal Ltd., a consortium of Japanese companies and the Canadian company Denison Mines Ltd. The project also involved creation of a new rail line through the Rockies (including North America's longest electrified tunnel), upgrading of the existing CNR line to Prince Rupert, and a new coal port. (See Map 1)

Among the justifications given for the development of northeast coal mines in general, and the NECP in particular, was the argument that coal mining would improve northeast B.C.'s economy. Improvement would come from diversification of the economic base, which was hitherto heavily dependent on agriculture, petroleum and forestry, and through increasing the total regional population. It was argued that coal mining would, directly and indirectly, provide jobs and improve business for people in the existing northeast B.C. communities.

This paper assesses the NECP's actual regional economic impacts. The assessment is based on analyses of custom tabulations of Statistics Canada Census data and 67 interviews conducted in the fall of 1989 with key informants selected for their expected knowledge of their communities. Financial support for the census data acquisition and the interviews was provided by Energy Mines and Resources Canada and the Social Sciences and Humanities Research Council.



MAP 1: STUDY REGION

PEACE RIVER COALFIELDS
TUMBLER RIDGE BRANCHLINE
B.C.R.
C.N.R.

Source: Adapted from B.C. 1981.

The area of study is the south Peace region, a region bounded on the north by the Peace River, the east by the Alberta border and the south-west by the Rocky Mountains. (See Map 2) The area contains the City of Dawson Creek (1986 population of 10,544), the town (District Municipality) of Chetwynd (pop. 2774), the District Municipality of Hudson's Hope on the northern edge (pop. 1158), the Tumbler Ridge new town (District Municipality, pop. 4385), a rural population of 8625 living in unincorporated villages and dispersed settlements, two Indian Bands, the West Moberly Lake Band and the Saulteau (East Moberly Lake) Band (pops. 50 and 200), and the Kelly Lake Metis community (pop. 250). (See Map 3)

The study can be seen as a case study of regional development through resource-based megaprojects. It shows the kinds of benefits and costs which can be created by the megaproject approach and the kinds of problems which can arise in the process of attempting to capture the benefits. The lessons learned from this case study can be compared with other (unfortunately few) retrospective studies of megaproject developments in frontier areas (e.g., Dixon 1978, Green and Bone, 1985, Dene Nation 1986) to enrich our understanding of the actual and potential relationships between megaprojects and regional development.

The following section reviews the history of the NECP and the expectations of its impact on regional development. Subsequent sections present our findings of the actual impact on regional residents and on each of the communities in the South Peace region.

MAP 2: LOCATION OF STUDY REGION

---- Study Area Boundary

Source: Adapted from Malkinson & Wakabayashi 1982.

MAP 3: STUDY REGION ROADS AND COMMUNITIES

Scale: 1:2,500,000

Adapted from British Columbia Road Map and Parks Guide 1988/89.

South Peace Study Area

History of the NECP and Regional Development Expectations

Serious exploration of the northeast coal belt began in 1970, focusing on the area south of Chetwynd. At a 1972 campaign rally, B.C.'s Premier W.A.C. Bennett presented outlines for a project in the Sukunka Valley. This announcement turned out to be premature. The mid 1970s turned out in fact to be a period of intensive study of the coal belt's potential and of planning for its development.

A 1974 federal-provincial study of northeast B.C.'s regional development potential identified the Peace River coalfields as a "major opportunity for regional economic development." Sounding the theme that was to run through future reports on northeastern coal development, the study noted that "careful planning" would be required "to ensure that the maximum economic benefits were achieved while at the same time minimizing adverse social and environmental impacts" (Malkinson and Sivertson, 1978, 3). In December 1975, the B.C. government identified $1 billion worth of northeastern coal mines it expected to come onstream in the early 1980s.

Promotion and planning for the northeast coal mines emphasized their potential region-wide and province-wide benefits. The 1976 Guidelines for Coal Development published by the Environment and Land Use Committee of the B.C. Cabinet stressed the need for "careful planning of large-scale developments... to ensure that a rational approach to managing land use, environmental and community impacts is undertaken prior to final decisions on coal and related developments being made" (B.C. 1977, 3).

Responding to the flurry of coal exploration activity in the northeast region during 1975 and the initiatives of several coal mining companies, the B.C. Cabinet formed a Cabinet Committee on Coal with sub-committees on Coal Resource, Environment and Land Use, Transportation, Manpower,and Townsite/Community Development. With the aid of federal funds, these sub-committees completed the first phase of their studies by February 1977.

The work of the Manpower sub-committee is of particular interest to this paper. Its primary focus was the provision of an adequate labour supply for the NECP, but it aggressively emphasized the

achievement of social goals in employment and training policies for the NECP. To paraphrase its terms of reference, its responsibilities in the planning process were:

a) investigation of factors contributing to community stability and reduced workforce turnover;

b) design and development of manpower training and development programs to
   - overcome identified shortfalls of labour supply,
   - improve British Columbia employment opportunities with special emphasis on access to jobs by North East residents, and
   - enhance employment prospects for selected target groups (Native peoples, women, the unemployed and potential school leavers);

c) analysis of the implications of development for migration;

d) analysis of special service requirements; and

e) analysis of the labour situation for competing industrial developments. (B.C. 1981a, 33-34)

In its report, the Manpower Sub-Committee argued that the Province should focus on maximizing employment opportunities for northeast residents, particularly certain target groups. The sub-committee's recommendations emphasized the great need for training programs and a development agreement with the mining companies to achieve these goals (B.C. 1976).

According to the Manpower Sub-Committee's assessment, there was a large supply of excess labour in the northeast. Determining that approximately 60% of the hourly workers at an open pit coal mining operation did not have to be highly qualified from the start of operations, the sub-committee argued that a large portion of the operation-phase labour demand could be met from within the labour force of the northeast region, provided adequate training programs were instituted in advance and certain other requirements, such as adequate day care facilities, were met.

> Research undertaken by the Manpower Sub-Committee supports the conclusion that the North East region already has the potential labour force required for development of North East coal. If people in the region are provided with the complementary resources (information about mining work opportunities, training programs, child care services, pre-employment "life skills" and employment adaptation counselling, etc.) they can make up <u>at least half</u> the work force. (B.C. 1976, 259, emphasis added)

The background studies completed for the sub-committee had identified a significant pool of labour in the northeast that was interested in coal mining employment (Cornerstone 1977), and the barriers to regional residents and certain target groups obtaining such employment (van Dyke 1976, Veit 1976).

The studies completed in the second phase of the Manpower Sub-Committee's work (1977-79) supported the earlier findings: training and comprehensive development agreements were required if long-term employment benefits to regional residents were to be maximized. These studies were conducted at a time when a global steel industry recession was slowing down the planning of the northeast coal mines.

By 1980 the tempo of the planning had changed. International disruptions in coal supplies encouraged the Japanese to negotiate intensely. In June 1980, an agreement-in-principle was reached by the federal and provincial governments, the CNR, and two local mining companies, to construct a new direct railroad to take coal from the Quintette and Bullmoose properties to Prince Rupert. During debate in the provincial legislature, Premier Bennett argued that "NECP", as this northeast coal project was now being called, " will mean thousands of jobs for British Columbians" (Hansard, June 17, 1980, 2878). In January 1981, a deal was struck between the various Canadian NECP parties and the customer, the Japanese steel industry.

There were several sources of concern about the deal. The Chairman of B.C.'s Coal Guidelines Steering Committee was concerned that the deal effectively committed coal sales before the mines' design and environmental plans had been reviewed and approved. (Vancouver Sun, January 31, 1981.) Some northeastern B.C. residents, being unsure about regional benefits and the impact of the new town that was to be part of the project, Tumbler Ridge, ineffectually asked for a public hearing. Critics argued that NECP would not, contrary to project justifications, serve to open up a new area of the province to forestry because the area was already being harvested at close to sustainable yield and there were no other significant minerals in the area. They also argued that spinoffs in servicing and equipment purchasing would go to Edmonton and the United States.

Responding to the barrage of criticism, the government tabled in the legislature in May, 1981, 100 studies which had been completed on the NECP since 1975. (The cost-benefit analysis was not

released until a year later.) In July, 1981, the Province released its Regional Impact Analysis of NECP (B.C., 1981b). This study estimated that by 1987 5,000 new jobs would be created in the northeast and that the population would grow by about 20% (10,000 people) over and above the base case projection. It predicted that between 10% and 20% of the direct mining jobs would be filled by regional residents.

> The 10% figure alone represents a significant attraction of regional workers while the higher estimate would require successful programs to hire traditionally underrepresented groups such as Natives, women, high school leavers etc. (B.C. 1981b, 37)

The 10% to 20% regional employment estimates in 1981 were much less optimistic from a regional development perspective than the Manpower Sub-Committee's 1976 conclusion that people in the region could make up "at leas. nalf" the work force required for development of North East coal.

The 1981 estimates were based on the following assumptions.

a) Relevant work experience (or training) is a valuable asset if not a necessity for many of the skilled jobs.

b) Unions will be seeking certification of the mines.

c) The mining companies are committed to hiring locally and regionally to the maximum extent possible and to minimizing the proportion of experienced miners required.

d) The interest among residents qualified for mine training programs may not be a constraining fact, but the availability and willingness to move among qualified persons may be a constraint. (B.C. 1981b, 36)

The fall of 1980 had been an important transition point in the planning process for the NECP. Previous government concern with analysis and evaluation was quickly replaced with a focus on implementation and getting the infrastructure in place on time and on budget. The North East Coal Development Office (NECDO) was established by the Province to coordinate construction, negotiate agreements with participants, and ensure the Province's social, economic and environmental objectives were addressed (Prince and Doern 1985). Development of manpower training programs to remedy the mismatch between regional residents' skills and mining needs became an "ongoing" rather than action-focused concern.

As construction of the mine began in the summer of 1981, the provincial government reported that "development of training 'modules' is progressing well,... investigations of means to encourage participation of disadvantaged groups are ongoing and recommendations... continue to be developed" (B.C. 1981a, 34). To our knowledge, no local training programs were in fact set up by any public agency.

In the comprehensive agreements negotiated with the coal companies, the companies committed to hiring locally to the maximum feasible extent, but specific hiring targets were not set. Training programs were established by the companies, but, as we shall see, these left much to be desired from the standpoint of many regional residents.

Regional residents were concerned about the extent and distribution of the benefits from NECP, and the costs. In consultations between the northeast communities and the Regional Impact Consultation Committee of NECDO, concerns were expressed about community stability, crime rates, municipal financial resources, housing, physical infrastructure, recreational and cultural facilities, staffing requirements of government agencies, and the influx of transients into the region. In addition, emphasis was placed by numerous community representatives on the need for regionally-provided training programs, with specially designed programs for Natives (B.C. 1981c). In its recommendations, the Committee focused on mitigating the short-term negative impacts (costs) of NECP rather than on capturing employment opportunities.

By the time NECP was underway, the 1970s planning objective of maximizing coal mining jobs for regional residents was obscured. The objective was now seen in terms of improving the overall regional economy.

> The impact of coal development on the region will be immense. North East British Columbia coal development will not only result in the creation of major employment opportunities in the immediate vicinity of the coal mines and at strategic points on the transportation network, but could also have a positive impact upon other sectors of the regional economy. Ancillary industries to assist in the service, supply and maintenance of coal mining operations will identify an opportunity to become established in the area and will add considerable strength and diversification to the local economic base. (B.C.1981a, 6)

To help the region capture the business opportunities associated with NECP and other major projects, the Province established a Procurement Policy in the early 1980s. The policy urged, but did not require, project developers to use B.C. suppliers and expertise. The policy suggested that company procurement plans and goals would become part of the project evaluation process on which Cabinet would base its decisions, and that procurement monitoring would occur throughout the construction phase (B.C. n.d.). In addition, the Province produced a set of pamphlets and documents advertising business opportunities associated with coal development and outlining bidding procedures for major projects.

In summary, from a regional development perspective, the history of planning the NECP can be seen as a process in which the exigencies of the mining business overwhelmed the vision of coal mining becoming an instrument for directly overcoming hard core rural unemployment. As dreams turned into reality, indirect, trickle-down mechanisms were invoked to stimulate the regional economy rather than the kinds of direct mechanisms many regional residents had called for and expected: comprehensive regional upgrading and training programs (rather than on-the-job training for already basically qualified workers), and local-hire and -procurement commitments embedded in the permitting agreements.

It is in this light that we analyzed census data and conducted interviews. Our aim was to determine the extent to which pre-existing individuals and communities in the region did in fact benefit, and at what cost, from the laissez-faire economic approach of the NECP megaproject.

Method

The choice of method to answer the question of regional benefits vs. costs is dependent upon resources and accessibility of information as well as the canons of reliability and validity.

The option of comprehensively surveying, or sampling, regional residents was rejected because of absolute cost considerations and the expectation that little information regarding employment of pre-existing regional residents would be yielded relative to the cost. The option of systematically surveying businesses to determine business spinoffs from the mine was rejected because of the known difficulties in getting business data usually jealously guarded and in getting data upon which confident quantitative judgements about spinoffs could be made.

The solution was seen to lie in a two-pronged method to yield quantitative and qualitative information: analysis of custom tabulations of 1981 and 1986 Statistics Canada Census data, and interviews with 67 persons judged to be, by virtue of their work or public office, in a position to have an accurate sense of the regional economy and NECP's contributions of to it.

The custom tabulations of the census data enabled comparisons, in terms of selected characteristics, to be made between regional residents in 1981 (i.e., persons living in the South Peace region at the time of the 1981 census which was taken just prior to the beginning of NECP construction) and in-migrants who arrived after 1981. The purpose of these comparisons was to determine the relative ways in which, and degrees to which, regional residents and in-migrants benefited from the NECP.

The interviews were conducted in October-November 1989, in person or by phone, by Ms. Knight and Kris Olds, a researcher in the Centre for Human Settlements. A questionnaire with open-ended questions was developed for this purpose. As in other research projects of this kind, the questionnaire served as a checklist in the interviews. The basic purpose of the interviews was to ascertain what the respondents felt were the benefits and costs of the NECP for their respective communities.

The next section of this paper presents the findings on comparative NECP benefits for regional residents and in-migrants. It is primarily based on the analysis of census data and secondarily on interview results.

The sections following discuss the impacts of the NECP on Native and the pre-existent non-Native communities. The discussions are primarily based on the interview results with some references to the statistical analyses.

Comparative Benefits of NECP for Regional Residents and In-Migrants

In 1986, recent in-migrants constituted a significant portion of the South Peace regional population: 33% of the population (9,320) had moved to the region within the past 5 years. This level of in-migration during the 1981 - 1986 period was somewhat greater than in the previous period: in 1981, 29% of the population had moved in during the previous 5 years. (In 1976, 26% of the population in the Peace River-Liard Regional District, which includes the South Peace, had moved to the Regional District within the past 5 years.)

Labour force participation and unemployment rates

In 1986, in-migrants had a higher rate of participation in the labour force than regional residents: 74.1% and 68.5% respectively. As economic opportunities are an important determinant of migration decisions, a higher participation rate among in-migrants is not surprising. A curious finding however, was that the unemployment rate of in-migrants and regional residents was almost equal in 1986, 16.1% and 15.8% respectively. Given the economic motivations that influence migration, in-migrants could have been expected to have a significantly lower unemployment rate than regional residents.

The similar unemployment rates between regional residents and in-migrants in 1986 may be related to the NECP's characteristics, particularly the creation of a new town and the male-oriented nature of the direct employment opportunities. Most of the in-migrant households were husband and wife units either with or without children. Many of the female spouses may have wanted to work but could not find employment, especially if the family residence was in Tumbler Ridge. According to the 1986 Census, the unemployment rate for men in Tumbler Ridge was 3.5%, but for women the unemployment rate was 24.7%.

Incomes

In 1985 (the income-year questioned in the 1986 census), in-migrants were better off financially than regional residents. Larger proportions of in-migrants than regional residents were in upper income categories. For example, 30.2% of individual in-migrants had incomes of more than $35,000 (about twice the average Canadian income that year) compared to 12.9% of the regional

residents. In-migrant households were also financially better-off than regional resident households: 59.1% of the former had 1985 incomes greater than $35,000 (about the Canadian average) compared to 35.6% of the latter; 30.2% of the former had incomes greater than $50,000 compared to 17.2% of the latter. These income differentials can be attributed to the comparative successes of the in-migrants and residents in capturing high-paying jobs in coal mining and certain spinoff sectors.

Occupations

Relative to the regional resident group, the in-migrant group had a much higher proportion of its experienced labour force in the mining industry and slightly more in finance, insurance, and real estate. The in-migrant group had a much larger proportion of its experienced labour force in machining, fabricating and repair, service, and social-technical-religious-artistic-recreational occupations, and a slightly larger proportion in processing, teaching, and health-related occupations.

Education levels

Reflecting these workplace differentials, in-migrants had generally attained higher education levels. Compared to regional residents, there were proportionally fewer in-migrants with less than Grade 9 education (7.1% vs. 17.2%) and a much larger proportion with post-secondary education, particularly in the non-university education with certificate category (25.0% vs 14.7%).

Direct jobs

In-migrants not only had a higher proportion of their own numbers in the high-paying jobs which required higher educations, they also accounted for the vast majority of such jobs in the coal mining industry itself. According to the Census data, there were 280 regional residents and 1,595 in-migrants employed in coal mining in 1986. (1) In other words, in-migrants got 85% of the coal mining jobs. Confirming the magnitudes of these data, the Tumbler Ridge residents interviewed in November 1989 said that the majority of mine employees during the early years had come from other mining communities in Canada. (2)

Whether the domination of direct NECP employment opportunities by in-migrants has continued is a question which cannot be answered with available data. Bullmoose does not keep records of

regional hiring. Quintette's hiring records do indicate whether a new employee is from within the region but the company does not have records on whether the leaving employees had been hired from within the region. An additional problem is that Quintette's definition of a regional resident is more forgiving than the one employed in this analysis.

Quintette's records indicate substantial hirings from the region (Table 1). However, the mining company's definition of the northeastern region extends from Prince George to Fort Nelson to the Alberta border. In effect this is the northeastern quadrant of B.C., an area much larger than the study region defined for this analysis.

TABLE 1
REGIONAL AND NON-REGIONAL HIRES,
QUINTETTE COAL LIMITED, 1982 - 1989

Year	Total # Hired	# Regional	# Non-Regional
1982	200	97	103
1983	600	312	288
1984	1200	276	924
1985	422	207	215
1986	161	74	87
1987	261	139	122
1988	418	178	240
1989*	309	159	150

* To Oct. 31/89

Source: Dianna Marks, Quintett Senior Recruiting Officer, Personal Communication, Nov. 89.

Regardless of the areal definition of the region, Quintette's hiring statistics must be interpreted cautiously because a local address on an application form has been sufficient to qualify the application as a regional one. During the early years of operation this may be an important qualification on the hiring data; several regional residents commented that many people trying to get employment at the mines used local hotels as addresses. This practice may have declined, if not disappeared, in later years as the general Canadian economy improved. On the other hand,

Quintette instituted a 'Relative Hiring Policy' in 1987 that gives preference to direct relatives of employees. A number of Tumbler Ridge residents suggested that in order to enhance their employment prospects people may move to Tumbler Ridge and live with their relatives who are already employees. These individuals would be recorded as regional hires in the Quintette records.

Quintette's hiring records suggest that, except for 1984, about half of their new employees have been hired from within the northeastern quadrant of BC. But it was in 1984 that Quintette hired the bulk of its operational staff and most of these were hired from outside the region. This major out-of-region hiring reinforced regional residents' perceptions that most of the operating jobs had gone to in-migrants.

Indirect jobs

Direct coal mining jobs are not the only employment opportunities related to the NECP. An employment impact analysis by Knight (1990) suggests that 1,588 indirect and induced jobs in the region were related to the coal mines in 1986. Analysis of census data indicates that 605 of these jobs were in Tumbler Ridge and that 90 (or 15%) of these were filled by regional residents.(3)

There is no way to determine on the basis of census data or other known data sources how many of the 983 (1588 less 605) indirect and induced jobs that were located in other communities in the region in 1986 were held by regional residents. However, in our interviews with owners and managers of regional businesses that have strong linkages to the mines, the businesses in which "indirect" jobs are located, it was indicated that by far the majority of people they hired for any increases in staffing were hired locally. Several of these interviewees commented that there were plenty of skilled people around who were not working, which made local hiring easy and sensible, and that the very limited out-of-region hiring was primarily for senior management or specialized positions.

The induced-business representatives interviewed (retail business persons and chamber of commerce representatives) reported that their businesses had not increased employment because of NECP. Since the induced jobs were not new jobs created by NECP but old jobs which were

able to survive the recession because of NEDP, it may be expected that most of the induced jobs were jobs kept by the regional residents who had them originally in 1981.

Women

The Manpower Sub-Committee of the NECP planning process argued that there were a large number of women in northeastern BC who could fill many of the jobs created by the NECP, and suggested that specific recruitment and training programs oriented to women would improve their employment opportunities and their general economic status in the region (BC 1976b). In a survey of northeast residents completed for the NECP (Cornerstone 1977), 60% of the women interviewed expressed an interest in mining employment. While the majority were interested in office or clerical positions, 16% were interested in non-traditional employment opportunities.

Only 160 women were working in the coal mining industry in 1986. While this number was double the total of 78 women employed by both mines in 1984 (Shera et al. 1987), it must also be considered in light of the 25% unemployment rate among women at Tumber Ridge that year. Three-quarters of the 160 women working for the mines in 1986 were in-migrants. Of the 40 female regional residents who were working in coal mining (2% of the total industry employment), one-half had moved to Tumbler Ridge.

Women's share of mining jobs has further improved since 1986. Results of our interviews in 1989 indicate women that year constituted 13% of the mining labour force, up from 9% in 1986.(4)

Conclusion

Based on the above analyses of direct, indirect, and induced NECP jobs, it can be concluded that in 1986 regional residents benefited from having 280 direct jobs and a maximum of 1073 indirect and induced jobs (including stabilized jobs) created by NECP for a maximum 39% (1,353) of the total jobs (3,463) linked to the coal mining activity. The regional residents (one-seventh of whom were women) had obtained 15% of the direct jobs and obtained or maintained a maximum 68% of the indirect and induced jobs.

Most jobs in the indirect and induced employment categories are generally lower paying than the direct mining jobs. The division of employment types between regional residents and in-migrants is reflected in the relative income and educational levels of the two groups: the mining jobs are higher paying and so the in-migrants have a higher wage; the mining companies offer on-the-job training and prefer people with higher levels of education, thus in-migrants, who are selected for this education, show up in the data as having higher education levels.

The findings from the census data analysis explain some of the results of the interviews with regional residents. All those interviewed claimed that few regional residents had obtained mining jobs, and that expectations had been much greater. Many regional residents without direct links to the mining operations believed that the NECP was not very important in the regional economy. These residents believed that if the coal mines shut down, the regional economy would not be strongly affected. Many of the indirect jobs, unless they were within a dedicated company, and most of the induced jobs were 'invisible' to these regional residents.

NECP Impacts on Natives and Native Communities

Interviews

Eight interviews were conducted with representatives of Native communities or organizations:

> The Executive Directors of the Friendship Centres in Dawson Creek (Nawican Friendship Centre) and Chetwynd (Tansi Friendship Centre). The Friendship Centres serve Native people of all statuses.
>
> The Kelly Lake Board Member of the Alaska Highway Pipeline Agency, a widely acknowledged leader. (There is no municipality in Kelly Lake.)
>
> Two Band Manager trainees, a former Chief, and the present Chief, of the Saulteau Band.
>
> The Chief, and the Acting Band Manager, of the West Moberly Band.

Native population and communities in the area

There are three Native communities near enough to the NECP to be impacted by the project's environmental impacts and to be attracted by project jobs. Kelly Lake is a Metis community of 250 people about 120 road kilometres to the east of Tumbler Ridge, a few kilometres off the Heritage Highway to Dawson Creek and on a short-cut to the shopping attractions of Grande Prairie (a sales-tax free Alberta city of 30,000 people). The Saulteau Band is about 20 road kms. north of Chetwynd with about 200 members living on the Reserve. The nearby West Moberly Band has 50 people living on the Reserve.

In the 1986 Census, 2,965 people living in the Peace River-Liard Census Division said they were single-origin aboriginal people. The total Native population would be much larger. The interviews with Native representatives in 1989 were in keeping with this expectation. The Director of the Nawican Friendship Centre in Dawson Creek estimated there were 6000 Metis people in the Peace River area, including the north Peace. According to the Tansi Friendship Centre in Chetwynd, people with some aboriginal background within a 20 mile radius of that community numbered between 2400 and 3000 in 1981. Kelly Lake's population was estimated by a community resident to be 250 permanent residents; community members who were living elsewhere would bring the total population of this community to between 400 and 500. According to Indian and Northern Affairs Canada, there were approximately 180 Band members living on

the two reserves at Moberly Lake in 1988. Clearly, people of aboriginal descent comprise a significant proportion of the regional population.

NECP impacts

All eight of the Native people interviewed reported great disappointment that NECP jobs turned out to be so difficult for Natives to get and widespread concern that the destruction and disturbance of the natural environment was causing serious problems for Native economies. In addition, they cited adverse community impacts in the forms of increased traffic and racial tension.

Many Native people had high hopes regarding the potential for employment at the mines; this was particularly true of people who lived in and around Chetwynd and Kelly Lake. All those interviewed said promises of employment were made, and many Native people filled out job applications. For example, the Tansi Friendship Centre in Chetwynd acted as a contact point for Quintette in 1983 and delivered about 120 applications in 1983/84 to that firm. As far as the Friendship Centre knew, the applicants did not receive a reply from Quintette and no-one got a job. This caused great disappointment, as it appears that the applicants thought that filling out the form virtually guaranteed them a job, or at least an opportunity to be trained for a job. The general impression among Natives interviewed was that when Natives got no response to their applications, Native people stopped trying to get jobs at the mines.

In total, it appears from the interviews, less than two dozen local Native people have ever obtained mining jobs. (5) The Kelly Lake representative reported that four of his community's residents worked at the mines. The Dawson Creek representative thought about 5 Metis people (including Kelly Lake residents) had worked at the mines. The Chetwynd representatives thought between 5 and 10 Native people (again including Kelly Lake people) had worked at the mines since they opened.

Representatives of the two Bands knew of no current members working at the mines, although "a few" of the Saulteau Band members got jobs at the start. From these reports, it seems to be a reasonable conclusion that about 10 Native people from the South Peace are currently working at the mines, and that about another 10 once worked at the mines. The latter group, it was reported by several respondents, held their mine jobs for 6 months to a year.

The major obstacle to Native employment was seen by the respondents to be a mismatch between mining company educational and skill requirements and Native qualifications. There was bitterness over the early promises of jobs and the lack of effective follow-through by the companies and planners, as the following quotes illustrate:

> A lot of people put their names into the mines on applications but no one got work. The big factor was that they wanted Grade 12 education. Even if I had 20 years experience driving machinery, I couldn't get a job because I didn't have enough education.

> We wanted jobs in the coal industry. People told us that we would get jobs. They always say this ... When the coal mine was on the drawing board, a lot of Indian people were interested in the business/jobs/training aspect. We were told to use the ARDA program to develop businesses to derive benefits from the NECP. However, it is hard to sit down and write a proposal without any education.

> Many Native people expected that Quintette and Bullmoose would just hire them because they applied. But the skills (bush work skills, driving skidders, operating a chain saw) were not what the mines needed - especially when most of them couldn't read.

> There were promises made, we had meetings with North East Coal. They were willing to hire and train people, if the people were willing. A lot of people said we're willing to do it, but when it did open, the hiring policy changed: if you haven't got any qualifications you can't work at the mine. We didn't have time to train anybody ... It was a big scam from my point of view. A few people applied and waited and waited and never got called, so others didn't bother. The people who applied never even got a response.

> No one [in our Band] received employment in any mine-related businesses in Dawson Creek or Chetwynd that we know of and no Native business received any work.

Environmental impacts

The NECP's negative impacts on the Native population in the area go further than the disappointment and unfulfilled promises regarding employment opportunities. Road improvements have opened what was essentially a wilderness area to increased access by recreationists, resource exploration companies and others. Increased access affects hunting and trapping patterns and yields, along with other land-based, traditional activities. The cumulative impacts of resource development in this region, of which the NECP is only one project, is gradually eroding the land

base of the aboriginal people and reducing their ability to be self-reliant. In turn, the environmental and economic impacts are hurting Native people in a number of other ways--personal, social, cultural, and spiritual.

> There's lots of skidooers and hunters in Tumbler Ridge and they're all over and the more hunting they do, the more serious problem we're having with our way of life. You know moose, most of the people live off that, it's a source of a way of life. There's a real decline in the animals - mostly moose, and caribou and elk.

> There were a lot of medicinal roots in the Bullmoose area but these are destroyed. Berry picking places are destroyed by Cats. A consequence is that people's eating and thinking habits are dramatically changed. This may be one reason why alcoholism is such a bad problem.

> A lot more southerners are up in the region hunting. The animal patterns are messed up with roads, rail and mining activities.

> There were four lakes that were stocked in the Kinuso Falls area, the two that were accessed by skidoo or by trike are fished right out.

> There's more activity with Tumbler Ridge, more hunting, more skidooing, more trekking in the summertime, going into people's trapping cabins... There's a real impact with people going out on skidoo and roaring through when you have a set of line.

> The Sukunka River area and other places in the region have been affected. Now, we have to go up into the mountains to catch fish like we used to.

> You don't feel safe walking out there (on the road through Kelly Lake) at night with the heavy tankers, trucks, to Alberta. They sneak through Kelly Lake to get away from the scales. it has affected the quality of the roads. You have to change the windshield in your truck every 3 months. All the people in Tumbler Ridge go into Alberta to do their shopping. On Friday nights there's lineups of people going to Alberta and coming back on Sunday nights. In the summertime it's really bad. [If your house is] close to the road, there's so much dust you can't even leave your window open.

Racial tension

In the Moberly communities, it was felt that the influxes of population and the depressed state of the Native communities was leading to a resurgence of racial tension.

> The atmosphere in the area has changed for the worse. In the 1950's and 60s there was a lot of prejudice between Natives and White people. During the 1970's, these feelings declined almost to the point where we were both looking

upon each other as friends. However, with all of the development projects coming in, there is more tension in the area.

We have suffered from the social impacts of all of the mega-projects in this region... We are fighting a losing battle. The biggest thing is the external influence on the Band - the loss of spirituality and the connection to traditions.

The bottom line

The Native interviewees were unequivocal in their negative assessment of the NECP.

There is no gain whatsoever. There has been no benefit to the community. [NECP] has done more damage than even in the past.

It seems like we're always the last to be consulted. We know the area however. Indian people need to be involved initially, as part of an ongoing process, a negotiating process. We should be involved because we live here. We can't leave or sell out. This is our permanent community.

NECP Impacts on Non-Native Communities

Interviews

Interviews were conducted with selected community representatives from Dawson Creek, Chetwynd, and Tumbler Ridge. Representative from Hudson's Hope were not contacted because only a few people are commuting from this area to work at the mines, and interviews with Tumbler Ridge residents suggested there was little interaction between the two communities.

Expected population and employment impacts

The province's expectations regarding employment and population impacts on the non-native communities in the region are shown in Table 2. The actual change in population and employment between 1981 and 1986 is presented in Table 3.

TABLE 2
EXPECTED 1986 POPULATION AND EMPLOYMENT IMPACTS,
NON-NATIVE COMMUNITIES

	Dawson Creek	Chetwynd	Tumbler Ridge
Employment Impacts			
basic	174	87	1484
non-basic	924	346	924
total	1098	434	2408
Total Employment	7616	1752	2408
Population Impact	2746	1084	6019
Total Population	19039	4379	6019

Source: BC (1981b)

The Census data in Table 3 indicate that while Chetwynd's population, employment, and average household income all modestly increased from 1981 to 1986, those indicators for Dawson Creek all declined over the same period, while in the rural areas they remained relatively stable.(6)

TABLE 3
POPULATION AND EMPLOYMENT,
SOUTH PEACE COMMUNITIES, 1981 - 1986

	Dawson Creek		Chetwynd		Rural		Tumbler Ridge	
	1981	1986	1981	1986	1981	1986	1981	1986
Population	11373	10544	2553	2774	8555	8625	0	4385
Employment	5245	4445	1150	1225	3860	3780	0	2090
Average HH Income	33022	27928	34952	35037	32782	30819	0	54945
Unemployment Rate	7.7	17.4	4.8	18.1	6	14.5	0	9.9
Number Unemployed	550	935	75	270	285	640	0	235

Source: Statistics Canada, Census, various years.

While these census data might be interpreted as indicating that the region's communities received few benefits from the NECP, these communities might have been significantly worse off without the NECP. Knight's (1990) analysis of employment and population impacts indicates that 1,348, or 39%, of the total number of regional direct, indirect and induced jobs related to the NECP in 1986 were located outside Tumbler Ridge.

With regard to direct jobs in particular, analysis of the Census data shows there were 365 people commuting to work at the mines in 1986; 207 people were commuting from Chetwynd, 93 from Dawson Creek, 13 from Hudson's Hope, 14 from the region's rural areas, and the remainder from outside the region. (7) In addition to these direct jobs, there were 983 indirect and induced jobs in the region outside Tumbler Ridge. Virtually all of these jobs would have been located in Dawson Creek and Chetwynd. Interviews with mine purchasing personnel and Tumbler Ridge residents regarding their purchasing habits indicate that perhaps 80% of these jobs were in Dawson Creek and 20% in Chetwynd.

The perceptions of Dawson Creek, Chetwynd, and rural area business and other leaders whom we interviewed regarding the community impacts of NECP are reported below.

Dawson Creek

Twenty-one community representatives were interviewed in Dawson Creek. Thirteen managed retail stores, and four managed mining supply businesses. In addition, interviews were conducted with the Manager of the Chamber of Commerce, the Mayor, the City Administrator, and the Economic Development Coordinator. One of the retail merchants was also president of the Ratepayers' Association.

The NECP is generally regarded as very important to the local economy by politicians and business people; however, they also felt the megaproject's impacts have not been as good as they might have been.

During the construction period (1981-1983), before Tumbler Ridge was finished, and in the early years of the operating phase before many stores opened in Tumbler Ridge (1983-1985), Dawson Creek merchants did well. The NECP mitigated the effects of the national 1982-83 recession and even created a short-lived boom.

> The high expectations created inflation. My duplex was $650 during [mine] development, but I think that you can get it for $450 now. When I came to town [in 1982] it was almost impossible to rent. The landlord didn't give a dam because there was a Tumbler Ridge family to rent to... There wasn't a hotel that wasn't in operation, and now we have the old Voyageur all boarded up.

> When the project was announced I was working in real estate and sold 12 homes that day and for the following 2-3 months there was a real estate boom in the city... There was excess investment and overbuilding because of high expectations. Approximately 300 apartment units and 400 hotel/motel units were put in in 1980/81. There was also excess investment in commercial space. It's only been in the last year or so that Dawson Creek has caught up to the excess capacity that was installed....But the project dampened the impacts of the recession.

> The mine helped us fight off the impact of the recession. 1983, '84 and '85 were the best years as Tumbler Ridge had nothing out there for shopping at all.

Business declined significantly in 1985, however, and heavy losses were incurred by some businesses, speculators, and homeowners. (It was reported that the City itself did not overdevelop serviced industrial lots in anticipation of project spinoffs.) Since 1986, business has been improving (as indicated for example by receipts at the mall).

Today the NECP is seen as a significant but not crucial boost to the town's economy. The impacts are focused in the areas of retail sales to Tumbler Ridge residents (perhaps 25% of all Dawson Creek's retail sales), mining supply businesses, some commuting by workers residing in Dawson Creek (estimated to be between 50 and 100 people), training for Dawson Creek workers (including those who move to Tumbler Ridge and back), and improvements in the entrepreneurial climate as local businesses respond to the large, but demanding, opportunities created by a large international mining operation (which require local businesses to adopt more competitive purchasing and pricing behaviour, stock a wider range of products, and offer 24 hour service).

While Grande Prairie was seen as a strong competitor for Tumbler Ridge business, Dawson Creek's retail sectors also seem to be benefiting broadly from Tumbler Ridge. The retail merchants who were interviewed reported that 5% to 35% of their sales now go to Tumbler Ridge residents (Table 4).

> Grande Prairie probably gets three times the business [Dawson Creek does] just because of [their relative] size and more selection. Tumbler Ridge residents probably go there for dry good shopping, mall shopping too. Hardware and gift items as well. Food here though.
>
> The [furniture store] has a van running out steady [to Tumbler Ridge]. The appliances and furniture people do well with Tumber Ridge related business.
>
> NECP is vital to the whole economy. We [a department store] wouldn't stay in business without it.
>
> The radio station went to 10,000 watts just to reach Tumbler Ridge. Aimed to get them with advertising.

The Dawson Creek interviewees reported that automobile business with Tumbler Ridge was strong, because cars could not be purchased in sales-tax free Alberta then licensed in B.C.

> Tumbler Ridge residents go to Grande Prairie a lot, and see the bigger stores and escape form the taxes. Dawson Creek people do it too. You can't buy cars [from Alberta] because you have to licence them, but you can get away with other things.
>
> People buy recreation vehicles out of Grande Prairie because of the [sales] tax and they aren't licensed like cars.

TABLE 4
TUMBLER RIDGE BUSINESS OF SELECTED DAWSON CREEK RETAILERS

Store	Annual Sales to Tumbler Ridge	% of Total Sales	% of Workers TR-Dependent
Department store "A"	$100,000	6%*	
Automotive business	$ 70,000	10%	0
Automotive business		30-35%	
Major food store		10%	10%
Department store "B"	$200,000	20%**	10%
Clothing store		25%*	25%
8 mall merchants (consensus)		25-35%	

*=percentage figure based on analysis of customer records by respondent
**=figure includes sales to Quintette for their houses

Business people with a direct link to the mining operations, i.e., the suppliers, tended to see the NECP as greater in importance to the Dawson Creek economy than some of the retailers. There is a wide range of suppliers in Dawson Creek. They range from a flower Shop which does "a large proportion" of its business with Quintette and Bullmoose because "the mine buys when employees are sick," and a print shop which does $100,000 annually (30%) of its printing business with Quintette and $75,000 (10%) of its stationery business with Bullmoose, to a trucking company which reported doing $1.5 million (20%) of its business with Quintette (plus a little less than half that with Tumbler Ridge businesses and residents), accounting for 8 to 10 employees, and a heavy construction company that does $10 million (50%) of its annual business with the mines, accounting for about 20 employees.

The suppliers identified in the interviews also included a small metal fabricating company which does 33% of its business with Tumbler Ridge and Quintette, a machine repair company that built a special shop to repair the buckets and teeth of the large mine shovels, an auto company that has a contract with Quintette to propane their vehicles and maintain them, a company that overhauls

Quintette's tractors, the airline which moves parts and supplies for Tumbler Ridge through Dawson Creek, and a couple of small contractors doing road work and some of the geological work.

As one supplier said:

> If Quintette coal shut down tomorrow, we [our transport company] would be in trouble and Dawson Creek would be in trouble... There is so many people that do business with them, that it would throw everybody into a tailspin, including the transportation sector. If they shut it down it would be terrible - terrible for Chetwynd too because they have lots of business with Quintette.

In addition to increased retail and supply business, Dawson Creek has also taken on expanded regional responsibilities. One of these responsibilities is as a hospital centre. It was reported that people come from Tumbler Ridge to Dawson Creek for surgery, that a helicopter pad was added to the hospital for serious Tumbler Ridge injuries, and that the maternity ward was much busier. A new regional role some claimed was created by the NECP lies in servicing the oil patch.

> [NECP] gave better roads to the [oil and gas] rig people. At one point the oil and gas industry was totally served out of Fort St. John. Now there are two or three [companies] that are starting to settle in Dawson Creek. That could well be because of the better road structure.
>
> [The new road from Chetwynd to Tumbler Ridge] helped that area--they haul logs out of that area-- and it impacts both [Chetwynd and Dawson Creek].

There is some resentment that the direct road from Dawson Creek to Tumbler Ridge (the Feller Heights road) is only about to be paved this year, and that as a result Dawson Creek has lost potential business to Chetwynd and to Grande Prairie in Alberta.

> Dawson Creek was better prepared to handle considerably more than it got. The community hasn't received what it asked for, worked for. We pioneered a lot of stuff, welcomed those people, never chased them away, but did deny them access to our facilities by forcing them to travel the [unpaved] Feller Heights road to get to Dawson Creek. The coal project didn't build the Dawson Creek community the way it was expected to.

> They should have paved the Feller Heights road instead of the highway to Chetwynd. It would have made things a lot better for Dawson Creek a lot earlier: one and a quarter hours [driving time] vs. a couple of hours via Chetwynd.
>
> Grande Prairie has been very organized in trying to get Tumbler Ridge business. And they put together a real package--come stay in the Golden Inn for $20 per night and shop Sales Tax free.
>
> I hear that Grande Prairie has been very successful in pulling in Tumber Ridge people.. They can go out the back roads. Alberta put in a bridge [to facilitate the short cut].

There is also some resentment that the new town of Tumbler Ridge was built at all rather than a high speed commuter rail link from Dawson Creek.

School and recreational facility construction costs in Tumbler Ridge are seen as responsible for a 35% jump in Dawson Creek property taxes this year.

> The new schools out there at Tumbler Ridge has to be part of the reason why Dawson Creek has had a 35% increase in the school tax this year--the South Peace Ratepayers Committee has been established and they are after the School Board heads.
>
> There was no anticipation of the school tax problem.

Most interviewees did not think that the project had had any negative social impacts on the community, and only a few mentioned that some wilderness value had been sacrificed, usually countering this with the observation that the project had improved access to the tremendous recreational opportunities in the area.

Finally, there are conflicting opinions about the NECP's impact on the image and profile of Dawson Creek and its region.

> The project has hurt the region in terms of its profile for commercial investments. It used to be you only had to have 25% down for commercial loans, now it's 40% and trust companies won't touch the commercial stuff.
>
> Anything that gives you a population gain, and something where they're invested so much money does, helps with your political clout. In Victoria and in Vancouver, if you are beyond Hope, then you are beyond hope. Anything that helps us raise our population and the consciousness of our political people is good for us.

> NECP raised awareness of the area but not all to the good because of bad press. For example, you hear about QCL [Quintette] being in the wrong pit where there is too much overburden, and the arbitration hearings. I don't know of anyone holding off investment but don't see how you'd have much luck attracting secondary industry into Tumbler Ridge when there is so much uncertainty.

Chetwynd

Eleven people were interviewed in Chetwynd. Six were business people; two from the industrial/mining supply industry, two from the construction supply industry and one from the retail industry. The other business person managed the local Chamber of Commerce. Two of the business people serve as elected representatives in the local government, one as Mayor. In addition, interviews were conducted with the Deputy Clerk, the Economic Development Officer, and three newspaper people.

Generally, the NECP is seen to have had very little lasting influence on Chetwynd's economy. During the construction and early operating phase, Chetwynd boomed. However, as Tumbler Ridge's commercial sector developed, Chetwynd received fewer economic benefits. People believe the town has received far fewer economic benefits than were expected, and most people attribute this to the construction of a new town and the hiring policies of the mines. Many are resentful.

> Starting from when BP [British Petroleum] was going to do [the mining], and I went to that town meeting, everyone was going to be in Chetwynd. When they went ahead and built Tumbler Ridge, we said 'OK, we'll get some benefits from it', but the jobs weren't available because you had to be skilled miners. It wasn't the impact everyone expected.
>
> The expectations were quite high, particularly with what the mines and business people and government people were saying. Everyone was gung ho and when the construction was over... nothing. Our kids couldn't buy a job at the mines. They wanted people to move into Tumbler Ridge and buy a house. They also wanted people with existing skills so they brought them into Tumbler Ridge from places like Nova Scotia.
>
> It was just a token attempt to hire locally at the beginning. People would go to the hiring halls and offices and be told they couldn't be used when standing next to them was someone speaking French. This really reinforced the perception that it wasn't even BC people who were benefitting from the project. The early 1980s were a pretty desperate situation for a lot of people in the area and seeing jobs so close at hand going to people from elsewhere was really unfair.

At this point, most of those interviewed believe, Chetwynd would not be strongly affected if the mines close down.

> People aren't worrying about the mines closing down ... if one thing closes down, the next will pick up the slack.

> People thought they were going to get rich and that there would be no more unemployment and this is not what has happened. When this is all over it won't affect the amount of unemployment in the area one iota because there will just be more people coming in to take those jobs and the people who are on unemployment now will still be on it.

The present economic benefits from the NECP are seen to be concentrated in four or five mining supply businesses and a few service businesses (gas station, grocery store, drug store, dental clinic). The majority of people interviewed do not believe there are a lot of Chetwynd residents that commute to work at the mines. The increase in the regional tax base caused by the NECP is viewed positively as it makes it easier to get capital funding for regional projects. The addition of another community to the regional settlement pattern was also seen as positive in that it added another set of teams to the region's recreational stock, and opened up opportunities for the smaller communities to cooperate on projects and activities that they could not undertake alone.

> It's had some positive effect. Chetwynd people benefit because your stores would have a better selection.

The decision to build a new town is seen as one that has deprived Chetwynd not only of growth but also of new community facilities that Chetwynd has waited a long time for. There is some resentment that Tumbler Ridge residents get these facilities right away.

> There is a natural resentment from people in Chetwynd that Tumbler Ridge people can come in and get a new townsite and get everything brand new while we have to wait.

> Originally people thought that Tumbler Ridge would just be the mines with a very small population out there but the majority in Dawson Creek and Chetwynd. Then they build the town and Tumbler Ridge got all the facilities that Chetwynd could have had.

The short-term disruptions associated with the construction phase were considered to be better than the town's experience with previous large construction projects, and no current negative

social impacts were identified. Environmental costs were noted by only a few of the individuals interviewed.

> Generally, the whole northeast of BC has been negatively impacted with the megaprojects and the logging.

Rural Areas

Three members of the Board of the Peace River Regional District were interviewed. All were long-term residents of the area and had represented their electoral areas on the regional district board for at least 8 years.

Benefits generated by the NECP for the region's rural residents are seen to be mostly associated with the employment opportunities provided in the operating phase, particularly for young people, and in the boost the project provided to the regional economy during the recession. Generally, however, expectations were much higher regarding the employment opportunities. Most of the people getting jobs are from the rural area around Chetwynd. In addition, the extra tax revenues generated by the megaproject were seen to be a positive effect.

The costs of the NECP for the region's rural areas were seen to be in the areas of potential tax increases to service the large municipal debt associated with the new town, and environmental degradation. However, environmental costs are seen as an unavoidable component of resource development. Generally, the rural representatives were ambivalent about the NECP, believing it has not done very much for their constituents. However, they saw megaprojects as unavoidable in the north.

> Of all the megaprojects, I think Tumbler Ridge is one of the better ones as far as an impact to society goes and as far as an impact to our environment. Tumbler Ridge confines themselves to their own area.

> We had great expectations [about local benefits]. Maybe we had visions of grandeur because it was a large megaproject.

> [The money spent on megaprojects] should be spent on economic development projects, large and small, to create a tax base to expand services and build hospitals, and so on. We are short on manufacturing of our commodities - feed mills, feed lots, oil manufacturing, lumber manufacturing. This is what we're short on.

Summary

By far, the largest proportion of the most visible aspect of the NECP's economic benefits, the direct jobs in the coal mining industry, has accrued to in-migrants. The Census data also indicated that in-migrants, likely as a result of dominating the direct job opportunities, were wealthier and had higher education levels. However, regional residents gained more of the indirect and induced employment related to the NECP than in-migrants did, and the NECP in the early 1980s likely kept many regional residents employed who would otherwise have lost their businesses or jobs because of the recession. Regional residents without direct linkages to the coal mining operation were less aware of these economic benefits in their communities than business people were.

The two groups targeted for job creation by early NECP planners, women and Natives, initially benefited very little from the NECP. The situation has been improving for women; but for Natives, the situation is worsening because of environmental impacts which hinder land-based activities and because these impacts have not been offset by new jobs.

The pre-existent non-Native communities have, overall, gained from the NECP but less, much less in some cases, than had been expected. In Dawson Creek, NECP has provided a significant source of business for retailers, despite the competition from Grande Prairie, has proved to be an important source of business for a wide range of mining industry suppliers, and has encouraged new regional roles for the City.

In Chetwynd, the economic benefits from the NECP did not form a strong impression on the residents' minds. There was a very high level of disappointment among community members regarding the low level of local hiring that occurred. Nevertheless, the NECP has had an important influence on the community's economy; many people working at the mines now live in Chetwynd.

Business and political leaders in both Dawson Creek and Chetwynd would naturally have preferred for the new town of Tumbler Ridge not to have been built. Its opening caused a temporary bust in both economies, a bust exacerbated in Dawson Creek's case by the poor road

connections to Tumbler Ridge which have inhibited both commuters to and shoppers from Tumbler Ridge. The road is only now being significantly improved.

TABLE 5
SUMMARY OF NECP EMPLOYMENT IMPACTS, 1986

	Direct Jobs (N = 1,875)	Indirect/Induced Jobs (N = 1,588)	All Jobs (N = 3,463)
Percentage of Jobs Going to:			
1981 Regional Residents	15%	< 68%	< 39%
In-migrants	85%	> 32%	> 61%
Women	9%		
(1981 regional residents)	(2%)		
(in-migrants)	(6%)		
Natives	1%		
(of region)	(< 1%)		
1986 Residents of Pre-existent Communities	19%	62%	39%
(Chetwynd commuters)	(11%)		
(Dawson Creek commuters)	(5%)		
(Hudson's Hope commuters)	(1%)		
(rural area commuters)	(1%)		
1986 Tumbler Ridge Residents	81%	38%	61%
(1981 regional residents)	(7%)	(6%)	(7%)
(in-migrants)	(73%)	(32%)	(54%)

The NECP has stimulated the regional economy in aggregate, but the full potential of this stimulation could not be captured by those who needed and deserved it most because the originally proposed and widely expected training and support programs for regional Natives, women, and residents in general, failed to materialize.

Endnotes

(1) Of the 280 regional residents working in the coal mining industry in 1986, 140 were living in Tumbler Ridge, 85 in the region's rural areas, 15 in Chetwynd, 30 in Dawson Creek, 5 in Hudson's Hope and 5 in Pouce Coupe. Thus, 140 regional residents were commuting to work at the mines in 1986. This was a significant proportion (38%) of the total number of commuters in 1986, estimated by Shera et al. (1987) to be 365 (215 commuting to work at Quintette, 150 to Bullmoose). Of the total 365 commuters, 207 were living in Chetwynd, 93 in Dawson Creek, 13 in Hudson's Hope, and 14 in the region's rural areas; the remainder were commuting from outside the study region.

If the definition of regional residents is expanded to include people living in 1981 in the area of northeast B.C. north of the Peace River, only 20 more persons are added to the number of regional residents holding coal mining industry jobs in 1986.

Of the in-migrants working in the coal mining industry in 1986, 885 came from other parts of B.C., 640 from other provinces, and 45 from outside Canada.

(2) Shera et al. (1987, 98-114) examined Quintette's hiring records and found that, of 1410 employees in 1985, 987 were from BC and 336 of these were from the region as defined by Quintette (Prince George to Fort Nelson to the Alberta border). In fact, then, the "other mining communities in Canada" were mostly communities in other regions of B.C.

(3) The number of indirect and induced jobs located in Tumbler Ridge is derived by subtracting the number of Tumbler Ridge mining industry employees (total mine employment less commuters as reported by Shera et al.) from the total number of employed persons in Tumbler Ridge. The number of Tumbler Ridge indirect and induced jobs held by regional residents is determined by subtracting the number of Tumbler Ridge regional resident coal mining industry workers from the total number of regional residents living in Tumbler Ridge who were employed.

(4) The situation for women seems to have improved since 1986 when women held 8% of the coal mining jobs. According to our interviews with Quintette management, women constituted 10% of bargaining unit employees and 33% of the salaried staff in 1989, for a total of approximately 230 employees (115 in non-traditional jobs, 115 in salaried positions), or 15% of Quintette's total labour force. Management personnel at Bullmoose indicated that there were 12 women employed in 1989 (5 in salaried, 7 in non-traditional jobs), or 4% of Bullmoose's total labour force. Women at both mines held 13% of the total 1,891 coal industry jobs in the South Peace in 1989.

(5) The statistics available from the Census and the mines are consistent with these estimates. In our 1989 interviews, Quintette estimated that there were about 25 Native people working at the mine, but that only about one half were from the region. Bullmoose estimated there were 6 Natives working at the mine, mostly from Chetwynd. Data obtained from Employment and Immigration Canada, based on the 1986 Census, indicate there were 30 people of aboriginal descent working in the mining industry in the South Peace region in 1986. According to Shera et al. (1987) there were 27 Natives working at Quintette in 1984. Native people interviewed in Chetwynd commented that Native people came from outside the region to get a job at the mines; so it is possible some of these employees were not from the region.

(6) The unemployment rate increased drastically in Chetwynd because of a six month strike at one of the town's lumber mills in 1986.

(7) According to management personnel of the mining companies, there were 216 people commuting to work at the mines in 1989; at least 99 from Chetwynd and 15 from Dawson Creek. A change in the mines' housing policies in 1988 led to a number of people moving to Tumbler Ridge who had been commuting previously.

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